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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,637	06/12/2001	Chang-Whan Jung	SAM-210	4260

7590

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EXAMINER

NGUYEN, MINH T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/879,637

Applicant(s)

JUNG ET AL.

Examiner

Minh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicants' amendment filed on 2/10/03 has been received and entered in the case. Claims 1-12 are pending. The amendment presented therein overcomes the informality objections, and therefore, are withdrawn. Because claim 1 adds new limitation, new interpretation using the same reference is needed, the prior art rejections to other claims are remained, for the reasons set forth below. This action is FINAL.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it uses language which can be implied, i.e., "of the present invention" on line 6 should be deleted. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,517,151, issued to Kubota.

As per claim 1, Kubota discloses a fuse circuit (Fig. 6) for a semiconductor integrated circuit, comprising:

a plurality of fuses (there are four fuses); and

a plurality of transmission circuits (there are four, each transmission circuit is a circuit shown as circuit block 21 less the fuse in that circuit block), each transmission circuit being coupled to a corresponding fuse of the plurality of fuses (as shown, each corresponding fuse is in the same circuit block of the transmission circuit); each transmission circuit for transferring signals from an input node (the node on the left side of each of the circuit blocks 21) to an output node (the node on the right side of each of the circuit blocks 21) in response to a status of the corresponding fuse (depending on whether the corresponding fuse is blown or not), the input and output nodes of respective adjacent transmission circuits being coupled such that the transmission circuits are arranged in series (connected in series since the output node of one of the transmission circuit is connected to the input of the next transmission circuit).

As per claim 2, since the circuit blocks 21 are identical, each of the fuses in each of the circuit blocks has identical status.

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As per claim 3, each of the fuses includes two ends are shown in Fig. 6, and the lower end of each of the fuses in Fig. 6, which is seen as the first terminal, is connected to a power supply voltage.

As per claim 4, Kubota further discloses each of the transmission circuits comprises:

a transmission gate (for example, the transmission gate 24-1) having an input terminal (the terminal connects to node B) coupled to a corresponding input node, an output terminal (the terminal connects to drain of transistor 26-1) coupled to a corresponding output node (through transistor 23-1), and a primary control terminal (the terminal connects to the gate of transistor 26-1 and the second terminal of the corresponding fuse) connected to the second terminal of the corresponding fuse, and a secondary control terminal (the terminal connects to the output of the corresponding inverter); and

an inverter (the inverter connects to the second terminal of the corresponding fuse) having an input terminal connected to the second terminal of the fuse and the primary control terminal, and an output terminal connected to the secondary control terminal (as shown).

As per claim 5, Kubota further discloses the transmission gate includes a first conductive transistor (the left half of the transmission gate 24-1 is an NMOS type transistor) and a second conductive transistor (the right half of the transmission gate 24-1 is a PMOS type transistor), and these transistors are connected as recited.

As per claim 6, Kubota further discloses a power supply voltage at node 8 is applied to the input terminal of the first transmission gate 24-1 through the transistor connected diode 11' as shown.

As per claim 7, the recited resistor in each of the transmission circuits reads on the resistor which is connected to the second terminal of the corresponding fuse as shown in Fig. 6, and the resistor is connected as recited.

As per claim 8, Kubota discloses a fuse circuit storing information related to a semiconductor integrated circuit (Fig. 6), comprising:

a plurality of fuses (there are four fuses), each has two ends and one end (the lower end, the first terminal) is connected to a power supply voltage, the fuses storing predetermined information relevant to the semiconductor integrated circuit (determined by whether the fuse is blown or not); and

a plurality of transmission circuits (there are four, each block circuit 21 except the fuse, is seen as a transmission circuit) connected to the fuses as recited for transferring an input signal to an output terminal (when the transmission circuit is closed),

wherein the transmission circuits are connected in series (the output terminal of transmission circuit in the first block 21 is connected to the input terminal of transmission circuit in the second block 21, ...).

As per claim 9, since each of the fuses has two ends, it stores one bit of information, and the information can be anything which includes the information relevant to the semiconductor integrated circuit.

As per claim 10, this claim is rejected for the same reason noted in claim 4.

As per claim 11, this claim is rejected for the same reason noted in claim 5.

As per claim 12, this claim is rejected for the same reason noted in claim 7.

Response to Arguments

5. Applicants' arguments with regard to the claims have been considered but they are not persuasive.

Regarding the argument that fuses in Kubota are employed for permanently programming the operation state of the transmission gates 24-n, rather than variable programming via a command applied to the input terminals 25-n (page 6, last line). This argument is irrelevant because the claims do not require the fuse circuit is capable of permanently or variably programming as argued.

Regarding the argument that Kubota fails to teach or suggest "the input and output nodes of respective adjacent transmission circuits being coupled such that the transmission circuits are arranged in series" as recited in claim 1 or "wherein the transmission circuits are connected in series" as recited in claim 8. Instead, transmission gates 24-n in Subota are in parallel, not in series. The examiner notes that the claims require transmission circuits are arranged in series, i.e., *claims 1 and 8 do not require the transmission gates are arranged in series* as argued.

As clearly discussed in the preceding rejections, each of the transmission circuits should be interpreted as the entire circuit block 21 less the fuse in that circuit block, i.e., the transmission gate is only one element in the transmission circuit. Based on this interpretation, it is clear that each transmission circuit has an input node (left) and an output node (right), and the configuration clearly shows a series arrangement.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 703-306-9179. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Minh Nguyen
Examiner
Art Unit 2816

MN
April 6, 2003